

IPS Control: 1060244

Location: Richmond/CWT



Cooling Water Fan Where
Employee Fell

Tenets of Operations Violated:

#4 – Always follow safe work practices and procedures

#9 – Always follow written procedures for high risk or unusual situations

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*See the hazard – YOU are
too precious to lose
Our vision is that we all go
home safely every day*

Incident Description:

On Wednesday, June 18th, 2008, a mechanic fell approximately 10-12 feet inside a Cooling Water Tower (CWT) after falling through a plastic diffuser. The incident took place when three maintenance employees were working on a fan on the LSFO East Cooling Water Tower. While servicing the fan, one employee untied the fan blades to work oil through the fan gearbox. As he manually rotated the fan blade, the blade unexpectedly hit a second mechanic who was entering the fan blade area. This caused him to lose his balance and fall into the CWT.

The employee was able to arrest his fall and then pull himself out with the help of his fellow maintenance employee. Fortunately, the mechanic suffered no injuries as a result of this incident.

Investigation Findings:

- 1) Mechanic A was not aware of mechanic B's position when he manually rotated the fan blades. If he had been aware of the second mechanic's position, he would have waited to rotate the blades until mechanic B was outside of the blade's reach.
- 2) There was an insufficient area of load bearing material as a walking / work surface and personal fall protection was not used. It appears there was insufficient appreciation of the fall hazards involved in this work.
- 3) The confined space entry requirements for this work will be reviewed as part of developing best practice guidelines for maintenance work inside CWT fan shrouds.

Lessons Learned:

- 1) If the mechanics had communicated more effectively, then this incident would probably have been prevented.
- 2) Potential "line of fire" events can happen at any time.
- 3) Fall protection includes eliminating the hazard as well as to the use of personal fall protection systems..
- 4) Remain aware of others around you and watch for their safety also.
- 5) If circumstances had been slightly different, the same behaviors could have reasonably resulted in injury or even death.

Recommended Actions:

- 1) Reinforce communication expectations for performing this type of work. Richmond refinery is considering developing a JLA regarding peer-to-peer communications when job conditions change.
- 2) Assess if it is possible to permanently install grating able to support the weight of a person in CWT fan access areas.
- 3) Issue instructions to maintenance personnel for temporary installation of complete load bearing coverage below a CWT shroud when entry is necessary until a permanent load bearing grating (if possible) is installed.